

### 3<sup>rd</sup> Harmonic Monday Meeting Minutes

**Date:** July 24, 2006

**Time:** 9:30 A.M.

**Place:** Trailer 157 Conference Room

Attendees (P=Present):

C. Antoine		C. Cooper		E. Harms	P	A. Rowe	P
T. Arkan	P	N. Dhanaraj	P	T. Khabiboulline	P	N. Solyak	
L. Bellantoni		H. Edwards		D. Mitchell	P	W-D Moeller	P
C. Boffo	P	M. Foley		D. Olis	P		
H. Carter	P	C. Ginsburg		P. Pfund	P		

Minutes recorded by Dan

Minutes are posted at: [http://tdserver1.fnal.gov/dolis/39GHz\\_minutes.html](http://tdserver1.fnal.gov/dolis/39GHz_minutes.html)

3.9GHz Project page is: [www-a0.fnal.gov](http://www-a0.fnal.gov)

#### Meeting Minutes

##### Main Couplers

- Dan reports that (5) of (6) couplers received. He'll check on status of delivery of final coupler and reason for delay. Reports that QC is proceeding but slowly. W-D Moeller has seen the couplers and will show fabrication concerns to Dan.
- Wolf also says that 400C bake of couplers can reveal copper adhesion problems. This suggestion will be tried on at least one coupler.

##### HOM Couplers

- Elvin reports (3) coupler rec'd, one found to leak and returned to Ceramtec for re-work. Timer reports RF tests on couplers OK. Antennas will be trimmed as required for proper coupling to Formteil.
- Harry says to fabricate (3) couplers of modified JLAB design. Don Mitchell will release drawing set.

##### HOM bodies

- Timer and Don showed re-designed body and Formteil for robustness. Bodies on cavity-1 or 2 will be cut off and replaced with this design. Judgment on whether to replace all HOM bodies will be reserved after testing of this re-configured cavity and cavity-3.
- Cavity-2 formteil failures discussed some more. Since fracture surface is not etched, failure took place after last etch. Allan reports that after review of all processing steps, still no clear understanding on failure mechanism. Allan reports that tests on material samples and broken Formteils from cavity-2 reveal no insights into failures. Material embrittlement <20K discussed but possible source of stresses not understood. W-D Moeller points out low CTE at low temp and doubts this explanation. Rinse wand may have contacted Formteil. Allan reports wand is being replaced with one with greater clearances. Allan reports C. Cooper is working on getting weld hardness tested. Nandhini has some experience with nano-scale surface measurements and will discuss with Charlie.

##### Cavity-3 fabrication and test

- JLAB is proceeding with fabrication of cavity-3. Cavity will be visually inspected at FNAL after each processing step.